	Application No.	Applicant(s)
Notice of Allowability	09/911,840	CUMERALTO ET AL.
	Examiner	Art Unit
	Khanh Tran	2611

*-- The **MAILING DATE** of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the Amendment filed on 05/01/2007* .

2. ☒ The allowed claim(s) is/are *15-18, 20-26 and 28, which have been renumbered as claims 1-12, respectively.* .

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

1. The Amendment filed on 05/01/2007 has been entered. Claims 15-18, 20-26 and 28 are pending in this Office action.

2. Claims 15-18, 20-26 and 28 have been renumbered as claims 1-12, respectively.

Response to Arguments

3. Applicant's arguments, see Applicants' Remarks, filed on 05/01/2007, with respect to claims 17-18, 20-21, 24-26 and 28 have been fully considered and are persuasive. The rejection of claims 17-18, 20-21, 24-26 and 28 has been withdrawn.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

4. Regarding claim 15, claim 15 is allowable over prior art of record because the cited references (e.g. Partyka U.S. Patent 6,188,715 B1) do not teach or suggest the uniquely distinct features "*predicting, by the receiver, whether the future second transmission will be unsuccessful based on the first set of determined frequency hopping information*" and "*responding to a predicted unsuccessful future second transmission by adjusting the communicating between the first end point module and the receiver*".

5. Regarding claim 17, the pending claim is patentably distinct from Partyka U.S. Patent 6,188,715 B1 in that the pending claim performs the combination of steps of "*determining a message arrival time for a future first message ...*" and "*predicting, by the first reader, whether the first message will be successfully communicated*" and "*adjusting reception activity of the first reader according to a result of the predicting*".

6. Regarding claim 22, claim 22 is allowable over prior art of record because the cited references (e.g. Partyka U.S. Patent 6,188,715 B1) do not teach or suggest the uniquely distinct features "*predict whether the future second transmission will be unsuccessful based on the first set of determined frequency hopping information*" and "*respond to a predicted unsuccessful future second transmission by adjusting the radio communications between the first end point module*".

7. Regarding claim 24, the pending claim is patentably distinct from Partyka U.S. Patent 6,188,715 B1 in that the pending claim performs the combination of steps of "*determining an arrival time for a future first transmission ...*" and "*produce a prediction whether the first message will be successfully communicated*" and "*adjust operation of the receiver according to a the prediction*".

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.
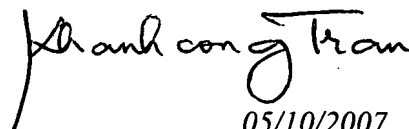
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

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05/10/2007
Khanh Tran
Primary Examiner, AU 2611

15.   (Previously Presented)   In an automatic meter reading (AMR) system comprising a

plurality of utility meter end point modules that generate and transmit utility consumption data,

and at least one AMR system receiver configured to receive consumption data transmitted by the

end point modules by way of frequency hopping spread spectrum transmission, a method of

communicating between a first end point module and the receiver, the method comprising:

　　　maintaining, at the receiver, transmission profile information for the first end

point module that represents at least a frequency hopping pattern used by the first end

point module;

　　　transmitting, by the first end point module, a first message, wherein the first

message includes an identifier of the first end point module;

　　　receiving, by the receiver, the first message;

　　　determining, by the receiver, an identity of the first end point module based on the

identifier of the first message to obtain a first determined identity;

　　　determining, by the receiver, frequency hopping information associated with a

future second transmission by the first end point module based on the first determined

identity of the first end point module to obtain a first set of determined frequency

hopping information;

　　　predicting, by the receiver, whether the future second transmission will be

unsuccessful based on the first set of determined frequency hopping information; and

　　　responding to a predicted unsuccessful future second transmission by adjusting

the communicating between the first end point module and the receiver.

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~~16.~~ 2 (Previously Presented) The method of claim ~~15~~ 1, further comprising:

transmitting, by a second end point module, a third message, wherein the third

message includes an identifier of the second end point module;

receiving, by the receiver, the third message;

determining, by the receiver, an identity of the second end point module based on

the identifier of the third message to obtain a second determined identity;

and

determining, by the receiver, frequency hopping information associated with a

future fourth transmission by the second end point module based on the

determined second identity of the second end point module to obtain second set of

determined frequency hopping information;

wherein the step of predicting whether the future second transmission will be

unsuccessful includes predicting whether any transmission collision will

occur between the future second transmission by the first end point module, and

the future fourth transmission by the second end point module.

~~17.~~ 3 .(Currently Amended) In an automatic meter reading (AMR) system comprising a

plurality of utility meter end point modules that generate and transmit utility consumption data

messages, and at least one AMR system reader configured to receive consumption data messages

transmitted by the end point modules, a method of operating a first reader, the method

comprising:

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determining a message arrival time for a _future_ first message to be transmitted by a specific end point module;

predicting, by the first reader, whether the first message will be successfully communicated; and

adjusting reception activity of the first reader according to a result of the predicting-step.

18. (Previously Presented) The method of claim 17, wherein the step of determining is based on an end point module message arrival list stored in the reader.

19. Cancelled.

20. (Previously Presented) The method of claim 17, further comprising:

transmitting the first message by a first end point module on a first frequency hopping spread spectrum (FHSS) channel; and

prior to the step of transmitting, determining, by the first reader, that the first message will be arrive on the first FHSS channel.

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21.   (Previously Presented) The method of claim 17, further comprising:

        initializing the first reader, including establishing logic for handling any missed

               end point module messages.

22.   (Previously Presented) An automatic meter reading (AMR) system receiver for receiving

radio transmissions from a plurality of utility meter end point modules that generate and transmit

utility consumption data by way of frequency hopping spread spectrum transmission, the AMR

system receiver comprising:

        a radio receiver; and

        a controller programmed to:

        maintain transmission profile information for ones of the plurality of end point

               modules, the transmission profile representing at least a frequency

               hopping pattern used by at least a first end point module;

        operate the radio receiver to engage in radio communications with the first end

               point module, wherein the radio communications include a first message

               originated by the first end point module that includes an identifier of the

               first end point module;

        determine an identity of the first end point module based on the identifier of the

               first message to obtain a first determined identity;

        determine frequency hopping information associated with a future second

               transmission by the first end point module based on the first determined

               identity of the first end point module to obtain a first set of determined

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frequency hopping information;

predict whether the future second transmission will be unsuccessful based

on the first set of determined frequency hopping information; and

respond to a predicted unsuccessful future second transmission by adjusting the

radio communications with first end point module.

23. (Previously Presented) The AMR system receiver of claim 22, wherein the AMR system

receiver is of a type selected from the group consisting of: a repeater, and a base unit.

24. (Currently Amended) An automatic meter reading (AMR) system receiver for receiving

radio transmissions from a plurality of utility meter end point modules that generate and transmit

utility consumption data by way of frequency hopping spread spectrum transmission, the AMR

system receiver comprising:

a radio receiver; and

a controller programmed to:

determine an arrival time for a _future_ first transmission to be transmitted

by a specific end point module;

produce a prediction of whether the first message will be successfully

communicated; and

adjust operation of the receiver according to the prediction.

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25.   (Previously Presented) The AMR system receiver of claim 24, wherein the AMR system

receiver is of a type selected from the group consisting of: a repeater, and a base unit.

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26.   (Previously Presented) The AMR system receiver of claim 24, wherein the controller

maintains an endpoint module transmission arrival list.

27.   Cancelled.

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28.   (Previously Presented) The AMR system receiver of claim 24, wherein the controller is

configured with logic for handling any missed end point module transmissions.

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